

REQUEST FOR QUOTATION <i>(THIS IS NOT AN ORDER)</i>		THIS RFQ <input type="checkbox"/> IS <input checked="" type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE		PAGE 1 OF 7 PAGES
1. REQUEST NO. N65540-02-Q-0535	2. DATE ISSUED 02 AUG 26	3. REQUISITION/PURCHASE REQUEST NO. 82400 22044306	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING
5a. ISSUED BY CONTRACTING OFFICER NSWC CARDEROCK DIVISION			6. DELIVER BY (Date) 02 SEP 27	
5b. FOR INFORMATION CALL (NO COLLECT CALLS)			7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)	
NAME 5001 S. BROAD STREET, CODE 335 PHILADELPHIA, PA 19112-1403 DAVID DENNISON		TELEPHONE NUMBER AREA CODE 215 NUMBER 897-1494 FAX: 215 897-7766		9. DESTINATION N65540
8. TO:		a. NAME OF CONSIGNEE NAVAL BUSINESS CENTER RECEIVING OFFICER, FISC, NSWC CARDEROCK DIVISION		
a. NAME	b. COMPANY	b. STREET ADDRESS 1601 LANGLEY AVENUE BLDG 542 E		
c. STREET ADDRESS		c. CITY PHILA.		
d. CITY	e. STATE	f. ZIP CODE	d. STATE PA	e. ZIP CODE 19112-5051
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5A ON OR BEFORE CLOSE OF BUSINESS (Date) 02 SEP 06		IMPORTANT: This is a request for information and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5A. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.		

11. SCHEDULE (Include applicable Federal, State and local taxes)					
ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
0001	REQN. NO. 82400 /22044306 ITEM NAME: SWITCHGEAR 480V, 2000A IN ACCORDANCE WITH THE ATTACHED SPECIFICATION AND TECHNICAL ELVALUATION CRITERIA.	1	EA		

12. DISCOUNT FOR PROMPT PAYMENT	a. 10 CALENDAR DAYS (%)	b. 20 CALENDAR DAYS (%)	c. 30 CALENDAR DAYS (%)	d. CALENDAR DAYS
				NUMBER PERCENTAGE

NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached					
13. NAME AND ADDRESS OF QUOTER		14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION		15. DATE OF QUOTATION	
a. NAME OF QUOTER		16. SIGNER		a. NAME (Type or print)	
b. STREET ADDRESS				b. TELEPHONE	
c. COUNTY				AREA CODE	
d. CITY	e. STATE	f. ZIP CODE	c. TITLE (Type or print)	NUMBER	

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SECTION F TIME OF DELIVERY

DELIVERIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS

ITEM	QUANTITY	DELIVERY REQUIRED
0001	1 EA	02-SEP-27

52.247-34 F.O.B. DESTINATION (NOV 1991)

52.213-4 Terms and Conditions--Simplified Acquisitions (Other Than Commercial Items) (MAY 2002)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) clauses that are incorporated by reference:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-3, Convict Labor (Aug 1996) (E.O. 11755).

(ii) 52.222-21, Prohibition of Segregated Facilities (Feb 1999) (E.O. 11246).

(iii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iv) 52.225-13, Restrictions on Certain Foreign Purchases (July 2000) (E.O.'s 12722, 12724, 13059, 13067, 13121, and 13129).

(v) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(2) Listed below are additional clauses that apply:

(i) 252.204-7003, Control of Government Personnel Work Product (Apr 1992)

(ii) 52.232-1, Payments (Apr 1984).

(iii) 52.232-8, Discounts for Prompt Payment (Feb 2002).

(iv) 52.232-11, Extras (Apr 1984).

(v) 52.232-25, Prompt Payment (Feb 2002).

(vi) 52.233-1, Disputes (Dec 1998).

(vii) 252.243-7001 Pricing of Contract Modifications (Dec 1991)

(viii) 52.244-6, Subcontracts for Commercial Items (Dec 2001).

(ix) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR and DFARS clauses, incorporated by reference, unless the circumstances do not apply:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-20, Walsh-Healey Public Contracts Act (Dec 1996) (41 U.S.C. 35-45) (Applies to supply contracts over \$10,000 in the United States, Puerto Rico, or the U.S. Virgin Islands).

(ii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

(iii) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793). (Applies to contracts

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over \$10,000, unless the work is to be performed outside the United States by employees recruited outside the United States.) (For purposes of this clause, United States includes the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.)

(iv) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

(v) 52.222-41, Service Contract Act of 1965, As Amended (May 1989) (41 U.S.C. 351, et seq.) (Applies to service contracts over \$2,500 that are subject to the Service Contract Act and will be performed in the United States, District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, Johnston Island, Wake Island, or the outer continental shelf lands).

(vi) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (Dec 2001) (E.O. 13126). (Applies to contracts for supplies exceeding the micro-purchase threshold.)

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (Apr 1998) (E.O. 12856) (Applies to services performed on Federal facilities).

(viii) 252.225-7001, Buy American Act and Balance of Payments Program (Mar 1998) (Applies to contracts for supplies or services that require the furnishing of supplies. The clause does not apply if an exception to the Buy American Act or Balance of Payments Program is known to apply. The clause may not apply if nonqualifying country end products are ineligible for award including--

(A) End products restricted to domestic or domestic and qualifying country sources under Appropriations and Authorization Act restrictions;

(B) End products restricted to domestic or domestic and Canadian sources; and

(C) End products restricted under the authority of FAR 6.302-3.)

(ix) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (May 1999). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(x) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(xi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (June 2000) (46 U.S.C. 1241). (Applies to supplies transported by ocean vessels.)

(xii) 252.247-7023, Transportation of Supplies by Sea (May 2002) Alternate III (May 2002) (Applies when transporting any supplies by sea under this contract.)

(2) Listed below are additional clauses that may apply:

(i) 252.204-7004, Required Central Contractor Registration (Nov 2001) (Applies to all contracts unless an exception is authorized by DFARS 204.7302.)

(ii) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (July 1995) (Applies to contracts over \$25,000).

(iii) 52.211-5 Material Requirements, Material Requirements (Aug 2000) (Applies to contracts for supplies

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that are not commercial items).

(iv) 52.211-17, Delivery of Excess Quantities (Sept 1989) (Applies to fixed-price supplies).

(v) 52.222-21 Prohibition of Segregated Facilities (Feb 1999) (Applies if the contract is subject to the clause 52.222-26, Equal Opportunity (see (b)(1)(ii) above)).

(vi) 252.225-7002, Qualifying Country Sources as Subcontractors (Dec 1991) (Applies if the contract is subject to the DFARS clause 252.225-7001, Buy American Act and Balance of Payments Program (see (b)(1)(ix) above)).

(vii) 52.243-1, Changes--Fixed Price (Aug 1987) (Applies to fixed-price contracts for supplies).

(viii) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate I (Apr 1984) (Applies to fixed price contracts for services, other than architect-engineer or other professional services, and no supplies are to be furnished).

(ix) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate II (Apr 1984) (Applies to fixed price contracts for services (other than architect-engineer services, transportation, or research and development) and supplies are to be furnished).

(x) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate V (Apr 1984) (Applies to fixed price contracts for research and development).

(xi) 52.247-29, F.o.b. Origin (Jun 1988) (Applies to supplies if delivery is f.o.b. origin).

(xii) 52.247-34, F.o.b. Destination (Nov 1991) (Applies to supplies if delivery is f.o.b. destination).

(xiii) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (Applies if the contract amount is expected to be over \$2,500 and the contract is subject to the clause 52.222-41, "Service Contract Act of 1965, As Amended" (see (b)(1)(vi) above)).

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

This Statement is for Information Only:

It is not a Wage Determination

Employee Class	Monetary Wage--Fringe Benefits
_____	_____
_____	_____
_____	_____
_____	_____

(xiv) 52.246-11 Higher-Level Contract Quality Requirement (Feb 1999) (Applies to contracts when the contracting officer finds it is in the Governments interest to require that higher-level quality standards be maintained and such standards are selected and identified in the clause).

The Contractor shall comply with the higher-level quality standard selected below. [If more than one standard is listed, the offeror shall indicate its selection by checking the appropriate block.]

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	Title	Number	Date	Tailoring
*	_____	_____	_____	_____
*	_____	_____	_____	_____
*	_____	_____	_____	_____
*	_____	_____	_____	_____

[Contracting Officer insert the title, number (if any), date, and tailoring (if any) of the higher-level quality standards.]

(c) FAR 52.252-2, Clauses Incorporated by Reference (Feb 1998). This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR clauses - <http://www.arnet.gov/far/>

DFARS clauses - <http://www.acq.osd.mil/dp/dars/dfars.html>

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) Within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor

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shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(End of clause)

Your quotation must include the following information:

Price list number and date

or

Cost breakdown by direct labor (list categories, hours and pay rates). In addition to the direct rates, provide the applicable indirect information (G&A), overhead, facilities capital cost of money (FCCM) and profit.

or

Applicable General Services Administration (GSA) contract number.

Business size:

Large _____ Small _____ Nonprofit _____

Cage Code _____

Tax Identification Number (TIN) _____

DUNNS _____

ELIGIBILITY REQUIREMENTS

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VENDOR:

All contractors and individuals doing business with the Federal Government must be registered at the Contractor Central Registration Database located at:
<http://ccr.dlsc.dla.mil/>.

ELECTRONIC DISTRIBUTION OF CONTRACT DOCUMENTS

All contract award and contract modification documents will be distributed electronically using the Navy Air Force Interface (NAFI) system. The contractor's copy will be provided in portable document format (pdf) as an attachment to an e-mail that will be sent to the contractor by the NAFI system. A pdf file may be accessed using Adobe Acrobat Reader software. This is a free software that may be downloaded at:

<http://www.adobe.com/products/acrobat/readstep.html>

Provide the following information that will be used to make electronic distribution for any resultant contract:

Name of Point of Contact to Receive
Distribution _____

Phone Number for Point of Contact _____

E-Mail Address for Receipt of Distribution _____

USE OF THE GOVERNMENTWIDE COMMERCIAL PURCHASE CARD

Will you accept the Governmentwide Commercial Purchase Card as a method of purchasing supplies and/or services.

_____ Yes

_____ No

Will you accept the Governmentwide Commercial Purchase Card as a method of payment for your invoice.

_____ Yes

_____ No

DUTY FREE ENTRY

Will any materials being shipped to the Government require a duty-free entry certificate for foreign supplies.

_____ Yes

_____ No

If yes, please include dollar amount \$ _____

SPECIFICATION NUMBER: PS01, Rev 2

DATE: 23 July, 2002

**Purchase Specification
For The
625KW Ship Service Fuel Cell Demonstrator Test Site
Switchgear**

Northrop Grumman Information Technology

Prepared By: R. Chranowski

Reviewed By: M. Lamberto

NSWCCD

Design Manager: _____
Ed House, Code 824

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1.0 Introduction

This purchase specification and all documents referenced herein contain all of the detailed requirements for (1) 480V, 2000A Switchgear Unit consisting of two metal enclosed vertical sections with a total of (6) drawout circuit breaker elements. The switchgear shall be Siemens Type R Switchgear with RLE-2000 and RLI-800 drawout circuit breaker elements, and static trip units type III or equal. The Switchgear Unit will be installed indoors at the Land Based Test Site in Bldg 77H at the Naval Surface Warfare Center, Carderock Division (NSWCCD), Philadelphia, Pa. The switchgear unit will be supplied 450 – 480VAC, 3 phase, 3 wire, 60 Hz, power from various power sources as described in this specification. The Switchgear will be used for Testing of a 625KW Ship Service Fuel Cell Demonstrator.

2.0 Scope

2.1 Equipment and Services to be Provided by the Supplier:

The Switchgear shall be suitable for industrial installation and shall be constructed in accordance with the best commercial practices. It shall be the Supplier's responsibility to furnish equipment suitable and complete in details for the services intended. The equipment shall be designed, constructed and tested in accordance with applicable regulations of IEEE, ANSI, NEMA, and the National Electrical Code, as specified herein. The Supplier shall be responsible for delivery of each of the following to NSWCCD-SSES in Philadelphia.

Item	Qty	Description
1	1	480V, 2000A Bus Switchgear, 60Hz, Nema 1 Enclosure
2	3	Switchgear Detail Drawing(s)
3	3	Technical Manuals
4	3	Spare Parts & Special Tools List
5	1	Test Data Sheet

2.2 Equipment and Services to be Provided by the Buyer:

The Buyer shall install the Switchgear. Also, the Buyer shall be responsible for the following items:

1. Mounting foundations, structural components and mounting bolts attaching the Supplier-furnished equipment to the site structure, and,
2. Associated cabling.

3.0 Applicable Documents

- NFPA-70, National Electrical Code
- IEEE C37.20.1 - Metal Enclosed Low Voltage Power Circuit Breaker Switchgear.
- ANSI C37.50 - Test Procedure for Low Voltage AC Power Circuit Breakers Used in Enclosures.
- ANSI C37.51 - Conformance Testing of Metal Enclosed Low Voltage AC Power Circuit Breaker Switchgear Assemblies.
- IEEE C37.13 - Low Voltage AC Power Circuit Breakers Used in Enclosures.
- ANSI C37.16 - Preferred Ratings, Related Requirements, and Application for Low Voltage Power Circuit Breakers and AC Power Circuit Protectors.
- NEMA C37.17 - Trip Devices for AC and General Purpose DC Low Voltage Power Circuit Breakers.

4.0 Release for Manufacture

The Supplier shall submit the following documents to the Buyer, for approval, prior to obtaining a Release for Manufacture:

Switchgear Detail Drawing(s) showing mounting details, equipment weight, cable entry, connection capabilities (number and size of cables), electrical schematics, electrical interconnections, and ratings of bus, breakers, and trip units.

5.0 Technical Requirements

Electrical Ratings:	480VAC (Max Voltage 508VAC), 60Hz, 3 phase, 3 wire, 2000A continuous minimum in 40C ambient. Breakers shall be rated for 85,000A RMS symmetrical short circuit interrupting rating with electrical system X/R<6.6. The breakers shall be able to interrupt maximum fault levels within .07 seconds of fault initiation. The breaker asymmetrical short circuit interrupting rating shall be a minimum of 100,000A RMS. Compatible bus short circuit ratings shall be provided for the breaker interrupting ratings specified. This switchgear will be supplied from various 60Hz electrical sources which are expected to be operated between 450VAC and 480VAC. These electrical sources have ungrounded electrical windings.
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Installation Location/ Enclosure/Type:	Indoors, NEMA 1 self supporting enclosure with top lifting provisions is required. Switchgear design shall allow bolting to (2) front and rear mounting channels which will then be bolted to a concrete deck. The enclosure shall be constructed of 14 gauge or thicker sheet steel with steel framing and an ANSI 61 light gray outdoor exterior finish. Each of the (2) vertical sections shall be no larger than 30"W X72"D X103"H. The rear section of the switchgear shall provide a minimum depth of 30" for cable entry and space for future Buyer installed current transformers. All breaker compartments (6 total qty) and control power transformer(CPT)/ relay compartments (2 total qty) in front of switchgear shall be isolated from each other and from the rear bus section. Each circuit breaker and CPT/ relay compartment shall be provided with a hinged front steel door secured with rotary latches requiring no tools to operate. Switchgear compartment designations and locations are shown in Figure 9.1 & 9.2.
Cable Terminations and Cable Entry:	Adequate space shall be provided to allow power cable passage and connection using Switchgear Supplied Nema two hole compression lugs with 1/2" diameter hardware. Swgr termination bolt holes for cable lugs shall accommodate lugs in the vertical or angled configuration to decrease stress on customer cabling. Cable Termination areas shall be rated for cable use at up to 90C ampacity. All power cables are expected to enter from the top rear of the switchgear and be connected to the appropriate breaker. See Figure 9.1 and 9.2 for expected layout and cabling.

Breakers:	<p>All breakers shall be (3) pole, single throw, stored energy mechanism Siemens type RLE – 2000, and RLI-800 or equal as indicated in Figure 9.2. Each breaker shall be electrically operated drawout type, padlockable in the trip position, interlocked to prevent racking out a closed breaker or racking in a closed breaker, interlocked to prevent closing breaker until fully racked to connected position or in test position, and interlocked to prevent racking a breaker into compartment with springs charged. Local breaker opening, closing, and manual spring charging shall be available without opening the compartment door. Breaker status indicators (open, close, springs charged, connected, test, and disconnected position) shall be visible without opening the compartment door. It shall also be possible to rack the breakers from the disconnect to connected position with the breaker compartment door closed. The breakers shall be equipped with a current sensor in each phase as shown in Figure 9.2. The current sensors supply the static trip units. A breaker racking tool shall be included with the switchgear. Maintenance space required in front of breaker cubicle door shall not exceed 46 inches. Each breaker shall have a N/O & N/C contact available for remote breaker mechanism position indication. These contacts should be wired out to a switchgear terminal block for customer connection.</p> <p>Each breaker shall have a separately fused 120vac control circuit with 120vac spring charging motor which will automatically keep the breaker ready to operate locally as well as provide capability of remote operation via an open and close interposing relay both of which would have a 120vac coil. One interposing relay shall have its N/O contact wired into the breaker open control circuit and its coil wired to a switchgear terminal block for remote control connection by customer. One interposing relay shall have its N/O contact wired into the breaker close control circuit and its coil wired to a switchgear terminal block for remote control connection by customer.</p> <p>The source of the switchgear breakers control power shall be from each of the switchgear 480-120vac control power transformers (see Figures 9.2 & 9.3). The control power transformer being utilized is selected by the voltage sensitive relays which are also located in the switchgear and shown in Figure 9.3.</p> <p>(See next page for continuation)</p>
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	<p>The following electrically operated breaker interlocks shall be provided to insure breakers specified are not closed into an out of phase power system condition:</p> <p>LBES Bkr 2D – Shall not be permitted to close if the Facility Power Bkr 1C is already closed or if there is voltage already present on the Swgr Main Bus.</p> <p>Facility Power Bkr 1C - Shall not be permitted to close if LBES Bkr 2D is already closed or if there is voltage already present on the Swgr Main Bus.</p> <p>Fuel Cell Enclosure Bkr 1D - Shall not be permitted to close if there is already voltage present on the Swgr Main Bus.</p> <p>Note: The electrically operated breaker interlock consists of an additional solenoid added to the breaker which must be energized before the breaker can be closed. When the interlock is deenergized the breaker is held trip free and can not be closed electrically or manually. The interlock has a manual link that goes to the main shaft of the breaker. The interlock is held in the picked up position when the breaker is closed. Once the breaker is closed, the interlock can be deenergized without tripping the breaker.</p>
Breaker Trip Units:	<p>The breakers shall have self powered RMS sensing overcurrent protection (Siemens Static Trip III or equal) with long time, short time, and instantaneous elements</p> <p>The breaker trip units shall allow various Long Time (.5, .55, .6, .65, .7, .75, .8, .85, .9, .95, 1.0 X Sensor Amp Rating), Short Time (2, 3, 4, 5, 6, 8, 12 X LT Setting), and Instantaneous (2, 4, 6, 8, 12, 15 X Sensor Amp Rating) current setpoints. Various delay curves shall also be available for LT and ST.</p>
Bus Bars:	<p>Bus Bars shall be tin plated copper and shall include a ground bus bar. The Breaker primary & secondary disconnects shall be silver plated.</p>
Fuses:	<p>(3) – 100A, 600V current limiting class RK5 fuses with fuse block shall be provided with cabling connection to the switchgear bus as shown in Figure 9.2 for future Buyer connection to PP2. Fuses shall be Bussmann Cat# FRS-R-100 or equal.</p> <p>(2) – current limiting primary fuses and one secondary fuse with fuse blocks shall be provided for each switchgear control power transformer (CPT). See Figures 9.2 and 9.3 for more details.</p>

Control Wiring:	Control wiring shall be type SIS, flexible stranded copper conductor, with 600V or 1000V, 90°C insulation. Minimum wire size is 14AWG. Wires shall be marked at each end with sleeve type wire markers. Wire markers shall be machine imprinted with the wire name as indicated on the wiring diagrams. Wire terminations shall utilize insulated ring tongue lugs except where connecting to components which do not accept these terminations.
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6.0 Technical Data

6.1 Drawings

Three sets of Switchgear Detail Drawing(s) showing mounting details, equipment weight with center of gravity, cable entry, connection capabilities (number and size of cables), electrical schematics, electrical interconnections, and ratings of bus, breakers, and trip units. The Buyer will approve the Suppliers drawings and provide a release for manufacture.

6.2 Technical Manuals

Three sets of Technical Manuals shall be forwarded not later than the delivery date of the equipment. Technical manuals may consist of manufacturer catalog data and technical data sheets for the equipment provided. Installation, Post Installation Testing , Operating Instructions, and Maintenance shall be included in the Technical Manual.

6.3 Spare Parts and Special Tools

A list of the recommended spare parts and special tools shall be provided with the proposal.

7.0 Inspection and Testing

Production Testing:	Production Testing on the switchgear shall be performed and shall include the following: dielectric, breaker overcurrent testing with utilization of primary current, functional checks of all breakers, auxiliaries, and related circuits which includes verification that all interlocks, padlocking, racking mechanisms, etc. are properly operating. Testing shall be documented and performed in accordance with industry standards prior to shipment. Test data sheets shall be provided to the buyer. The Customer reserves the right to witness Supplier Testing and to inspect the Switchgear prior to shipment to assure the supplied equipment meets the prescribed requirements.
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Design Tests:	Design tests such overload switching, endurance testing, short circuit, dielectric withstand voltage, trip device calibration, and heat run current testing, etc. are required to have been performed at some time in the past to prove the component types being utilized in this switchgear are acceptable. These tests shall have been documented and performed in accordance with industry standards prior to shipment. Test documents shall be made available upon buyers request.
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8.0 Shipping

8.1 Packaging

Equipment shall be packed for shipping in a manner which will ensure acceptance and safe delivery at destination. Supplier is responsible for damage during shipment.

8.2 Marking

Each Package shall be marked with the Contract Number, Contract Item Number, and Purchase Specification PS01.

8.3 Delivery

All equipment and technical data specified in this document shall be delivered to NSWCCD-SSES within 12 weeks after contract award to the address given below:

Commander
 Naval Surface warfare Center Carderock Division
 Naval Business Center Bldg 542
 Philadelphia, Pa. 19112-5083
 Attn: Mr. Ed House, Code 824

9.0 Figures

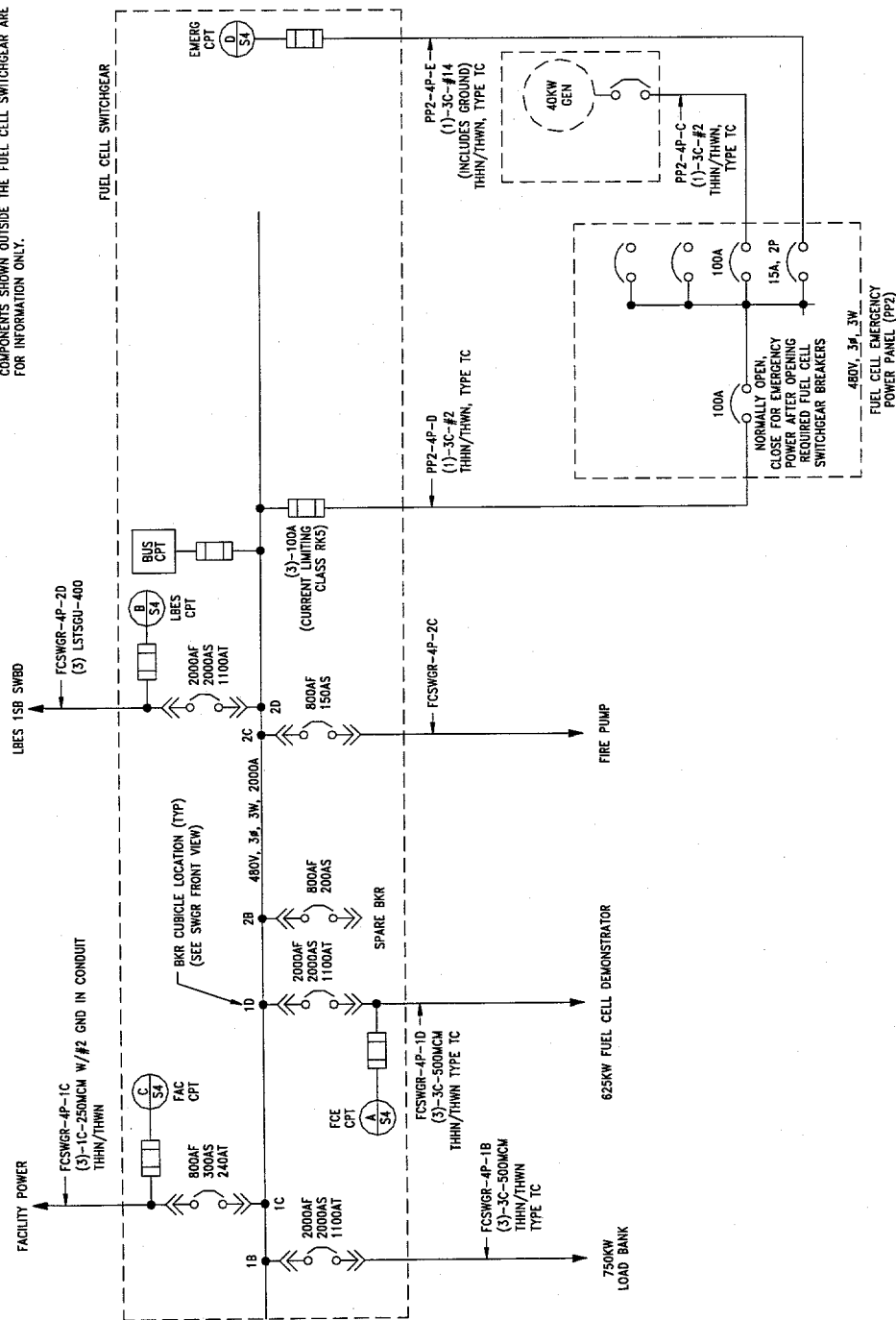
9.1 Switchgear Front View

CPT / Relay Compartment 1A	CPT / Relay Compartment 2A
750KW Load Bank Bkr 1B	Spare Bkr 2B
Facility Power Bkr 1C	Fire Pump Bkr 2C
Fuel Cell Bkr 1D	LBES 1SB Swbd Bkr 2D

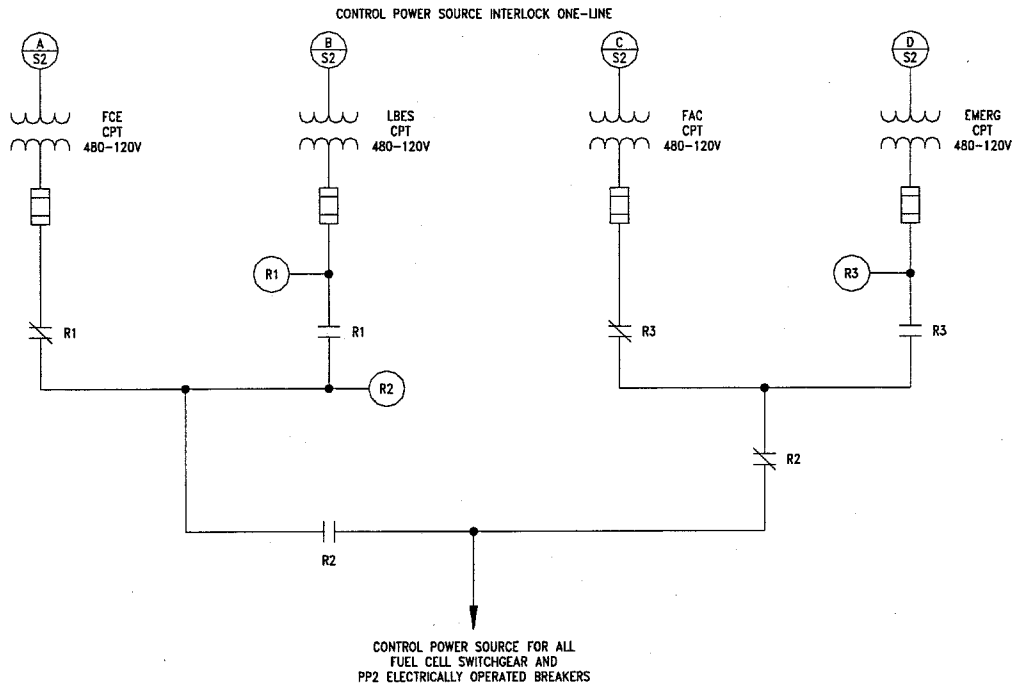
9.2 Power System One Line Diagram

NOTES

1. AF = BREAKER AMP FRAME
AS = BREAKER AMP SENSOR
AT = BREAKER LONG TIME AMP TRIP
2. THE SUPPLIER IS ONLY TO PROVIDE THE FUEL CELL SWITCHGEAR. COMPONENTS SHOWN OUTSIDE THE FUEL CELL SWITCHGEAR ARE FOR INFORMATION ONLY.



9.3 Control Power Source Interlock One Line



NOTES

1. ALL RELAY CONTACTS ARE BREAK BEFORE MAKE.
2. SEE FUEL CELL SWITCHGEAR ONE LINE FOR LOCATION OF CONNECTION FOR ALL CPT'S.
3. CONTROL POWER TRANSFORMERS HAVE TWO PRIMARY SIDE FUSES SHOWN IN THE FUEL CELL SWITCHGEAR ONE LINE AND ONE FUSE ON THE SECONDARY SIDE.
4. CONTROL POWER TRANSFORMER SECONDARIES HAVE NON FUSED SIDE GROUNDED.
5. RELAY CONTACTS ARE SHOWN WITH RELAY IN ITS SHELF STATE (DE-ENERGIZED CONDITION).

TECHNICAL EVALUATION CRITERIA FOR REQUISITION 22044306

The technical evaluation criteria for the subject requisition is as follows

The offeror shall prepare a proposal containing information necessary to evaluate the offeror's ability to provide services to successfully construct and deliver the switchgear and associated deliverables. The elements or criteria to be used in order for the government to determine the best value to meet the government needs are listed below. A rating of Outstanding, Above Satisfactory, Satisfactory, Marginal and Unsatisfactory will be applied to the information provided by each offeror for each element. An overall rating will then be applied to the offeror's proposal.

1. TECHNICAL UNDERSTANDING OF PRODUCT

The contractor shall in the proposal demonstrate an understanding of the technical requirements and the applicable documents that are described in the purchase specification. The spare parts and special tools list will also be evaluated as part of this criteria.

The rating will depend on the proposal demonstrating an understanding of the scope of the task.

2. MEETS CRITERIA SPECIFIED IN PURCHASE SPECIFICATION

The contractor shall in the proposal demonstrate that the product meets the criteria specified in the purchase specification. Greater weight will be given to switchgear detail drawings that show cable entry, connection capabilities, electric schematics and ratings of bus, breakers and trip units.

The rating will depend on the proposal demonstrating to meet the technical requirements.

3. PAST PERFORMANCE

The offeror shall provide a list of two (2) contracts presently active or completed within the last two (2) years for delivery of similar product. Contracts listed may include Federal or Local Government. Include the following information:

1. Name of contracting activity
2. Contract Number
3. Contract Type
4. Delivered Product

Contract POC's may be contacted to verify past performance related information.

The rating will depend on quality of past performance, and references from contracting officer and TPOCs concerning contractor quality and timeliness.

4. COST

The offeror shall provide a cost for the product specified in the purchase specification.

The rating will depend on the overall cost and delivery schedule.

CONTRACT DATA REQUIREMENTS LIST

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.		B. EXHIBIT A		C. CATEGORY TDP _____ TM _____ OTHER _____	
D. SYSTEM/ITEM Fuel Cell Switchgear		E. CONTRACT/PR NO.		F. CONTRACTOR	
1. DATA ITEM NO. A001		2. TITLE OF DATA ITEM Drawings		3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE PS01 Para 2.1 Item 2		6. REQUIRING OFFICE	
7. DD 250 REQ LTR	9. DIST STATEMENT REQUIRED	10. FREQUENCY Once	12. DATE OF FIRST SUBMISSION 15 Days after award	14. DISTRIBUTION	
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES
				Draft	Final
					Repro Reg
16. REMARKS				NSWCCD-SSES	1 3
				PHILA	
				Code 824	
15. TOTAL —>				1	3
1. DATA ITEM NO. A002		2. TITLE OF DATA ITEM Technical Manuals		3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE PS01 Para 2.1 Item 3		6. REQUIRING OFFICE	
7. DD 250 REQ LTR	9. DIST STATEMENT REQUIRED	10. FREQUENCY Once	12. DATE OF FIRST SUBMISSION 12 Weeks after award	14. DISTRIBUTION	
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES
				Draft	Final
					Repro Reg
16. REMARKS				NSWCCD-SSES	1 3
				PHILA	
				Code 824	
15. TOTAL —>				1	3
1. DATA ITEM NO. A003		2. TITLE OF DATA ITEM Spare Parts & Special Tools List		3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE PS01 Para 2.1 Item 4		6. REQUIRING OFFICE	
7. DD 250 REQ LTR	9. DIST STATEMENT REQUIRED	10. FREQUENCY Once	12. DATE OF FIRST SUBMISSION With Proposal	14. DISTRIBUTION	
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES
					Final
					Repro Reg
16. REMARKS				NSWCCD-SSES	3
				PHILA	
				Code 824	
15. TOTAL —>					3
1. DATA ITEM NO. A004		2. TITLE OF DATA ITEM Test Data Sheets		3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE PS01 Para 2.1 Item 5		6. REQUIRING OFFICE	
7. DD 250 REQ LTR	9. DIST STATEMENT REQUIRED	10. FREQUENCY Once	12. DATE OF FIRST SUBMISSION 10 Weeks after award	14. DISTRIBUTION	
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES
					Final
					Repro Reg
16. REMARKS				NSWCCD-SSES	1
				PHILA	
				Code 824	
15. TOTAL —>					1
G. PREPARED BY <i>[Signature]</i>		H. DATE 8/1/02	I. APPROVED BY <i>[Signature]</i>		J. DATE 8/1/02

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE